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Twenty-Sixth Year.

JOHNSON CITY, TENNESSEE, THURSDAY, DECEMBER 30, 1909.

Whole Number 1329

## ELECTRIC CITIES OF THE FUTURE

IT IS SAID THEY  
WILL BE WIRELESS

WONDERS UNDREAMED OF

The Age of Invention Has Not  
Been Reached or Started Yet  
Says Thomas A. Edison.

You ask if the age of invention is passing? Why, it hasn't started yet. We don't know anything yet. Why, we don't even know what electricity is yet. How can we say that we've reached the limit of a force whose very

all the world like an eccentric cucumber frame turned up on end. But let the sun shine on it and at once it starts its work. Not the solar heat itself, but rather the invisible rays that make up part of the solar spectrum, and the ultra-violet rays themselves—rays that we can not perceive with our eyes, but the effects of which we can prove—are absorbed by the violet glass, and their action on the metal plugs, the other ends of which are sheltered from the action of the rays, sets up chemical reaction that produces a continual flow of electrical power into a storage battery.

If this device fulfills its inventor's claims the solar generator has passed out of the realm of "to be" and into the realm of "is." It is now ready to perform its service in the world; ready to solve for all future humanity the economical, wasteless, free production of unlimited power, by stretching out its sensitive tentacles toward that infinite mass of energy daily hurled at the earth through 93,000,000 miles of space at the rate of 186,000 miles a second.

**Rivers as Power Sources.**  
Then there is the hydro-electric motor utilizing the river currents for the generating of electric power. So, again nature provides, and the factory wheels will be turned and cities lighted and electric trains moved by power emanating from the river currents, and without expense except for the machine, which will not be more, possibly,

ping, cream freezing, noodle cutting, vegetable paring, polishing and grinding.

It almost seems as if we would soon have the electric cook and housemaid, completely automatic, capable of doing the work of a large family in a couple of hours each day, and started and stopped by the turn of a switch.

The country will have an abundance of electric energy for light, power and heat on farms. The farming communities will flourish under the stimulus of an electrified topsoil, and an increased absorption of nitrogen, procured direct from the atmosphere by electricity. These processes are already successful as experiments on a small scale.

**Gyroscopes for Airship.**

In this wonderful dream city of the future, the business of transportation will be carried on altogether by electrically propelled vehicles and ships of the sea and air. As for the aeroplane, the electric gyroscope is expected to furnish stability for this device, and also for monorail, high speed trains, electrically driven. The locomotive as we now know it will be obsolete, but the electric locomotive will have come to its own for general freight and passenger service, and it will haul its long string of cars over a single rail at a speed in excess of 100 miles an hour.

In monorail motion all danger of lateral impact experienced by railroads of today is eliminated. The forward motion and the gyroscopic force of the driving wheels maintain perpendicularity in the monorail without the help of the guide rails, which are in reality only safeguards when the car is at rest, and give the car the proper lean at curves. There are only the vertical irregularities of the rail to be taken into account, the center of gravity being directly over the support, tending unaided to stay there. Taking into account this great potential advantage, and the small cross section of the train to overcome all resistance, a much higher rate of speed may be safely maintained than is either possible or safe with double rail vehicles.

Since there is no gauge to maintain in this new railroad, the oft occurring accidents from spreading rails will be eliminated. This remarkable means of high speed transportation has not been left for the electric city of the future. A road using the invention is even now being constructed in New York, through Pelham Park to City Island. Engineers of the Public Service Commission say that a speed of 135 miles an hour may be expected over parts of the route where right of way has been granted away from highways, so that the train headway may be unrestricted. If this line meets with the approval of the public application will be made for permission to operate monorail express trains on an upper deck over the present elevated railways in New York.

Today the realistic and marvelous stage effects produced by electricity are an indication of what may be expected in the real city of the future. Moonlight and sunlight effects, falling clouds, rain and rainbows, falling stars, the aurora borealis, smoke and flame, sandstorms, real lightning and even animal illusions, such as flying butterflies, crawling or jumping insects and climbing monkeys, can be displayed by the operations of cunningly devised electric lamps.

**Artificial Lighting.**

Since the earliest dawn of history the apparatus used for artificial lighting has been a subject of ornamental and artistic treatment. From the crudest forms of earthenware lamps to the most elaborate chandeliers, through every historical period and among all nations, the means for supporting lamps and candles for artificial light-

for sun generators will literally store the sun's rays by day for use by night. The invention of the tungsten lamp will make this idea of universal lighting an actuality. The economical features of this lamp have revolutionized electric lighting, just as the new means of generating electricity will revolutionize the cost factor.

The automobiles which will traverse the streets of the future electrical city will be driven altogether by electricity, for the machine will generate its own power by means of a sun generator attachment. And the electric truck will soon be provided with a means of loading and unloading by electricity.

Going beyond the electrical city and viewing the electrical world of the future we see the desert wastes of all lands transformed into flowery gardens and prosperous cities rise where once there had been only desolation.

The practical means for accomplishing this has been provided by an inventor who, after a quarter of a century of experimenting, has evolved a pump, operating by electricity, which will furnish to the most arid districts all the water desired.

This pump, with a two-inch bore, weighing only twelve pounds, will bring out of a well or any other body of water 240 gallons a minute, or one-third of a million gallons a day, so its inventor declares.

**How Water is Moved Along.**

The mechanism of this device consists of a series of duplex screws within a cylinder so arranged as to pass on a column of water from one unit to another without a slip. These screws are made to spin at tremendous speed, up to 10,000 revolutions a minute in the smaller sizes. Roller bearings are used at all points of contact, thus reducing friction to a minimum.

Now, the most wonderful part of it all. The electrical energy for these various uses will be transmitted without wires.

Wires for the transmission of telegraphic and telephonic messages will be no more. The city of the future will know no such thing as the unsightly overhead cable or the expensive stringing of wires in underground conduits. Wireless will also make it unnecessary for you to go to the opera. The opera will come to you. This has been made possible by the wireless telephone with a microphone attachment, which may be placed in your library, drawing room or music room.

It is simple enough, so simple in fact that the "angel child" will be turning on the receiving switch while mother is out of the room and pulling the instrument from the wall in a rage because Caruso insists on singing "Donna e Mobile" instead of "Yankee Doodle." Seriously, Dr. Lee de Forest believes that the time is not far distant when all humanity may partake of the now expensive grand opera—not a mechanical version, as in the case of the phonograph, but the real thing—transmitted into your home even more clearly and distinctly than you can now hear the spoken words of a friend through the telephone.

It will not be necessary to put the receiver to your ear in order to hear the voices of the singers on the stage of the Metropolitan or Manhattan or some other opera house. A large wireless transmitter hung above the stage will flash out over the Hertzian waves and into the receiver in your home and many other homes every perfect note of the artists and every score of the orchestra. On your receiver will be an attachment which will cause the room in which you sit to be filled with the music in all its volume, and you will hear each note just as distinctly as if you occupied a box in the front row of

ton, it is estimated, will easily span a distance of 3,000 miles. This will provide a means for the direction of a fleet in the Mediterranean by and admiral sitting in his office at Washington.

The airship of the future, like trains, vessels of the sea, the automobile, will be propelled by electrical energy transmitted without the use of wires.

The electrical city of the future will be a most enjoyable place in which to live. No longer will we have the annoyance of smoke and soot from factories and coal burning locomotives, or from the numerous iron smokestacks which rise above the roofs of the modern apartment houses and office buildings, since electricity will undoubtedly be used altogether for keeping us warm in the winter and cool in the summer. Our homes will be protected from undesirable by a new electric burglar alarm which will not only announce the intruder, but will take his photograph as well, to be handed down to future generations—or at least to the police commissioner.

The marvelous strides in the electrification of all the world may result in cities beneath cities. Even as we now have drug stores, cafes, department stores, news stands with subterranean entrances from subway stations, so within another fifty years there is likely to grow a second New York underground.

**The Underground City.**

The route of the underground moving platform will become a busy center of commercial activities. All along the route scurrying throngs will step from the electric sidewalk and rush in and out of department stores, restaurants, jewelry, dressmaking, haberdashery, tailoring and grocery establishments. There will even be banking houses and wireless telegraph offices. Automatic wireless telephones will be found everywhere for communicating with any part of the subterranean city or the one above.

One can foresee the time when the man on the street, on the trolley car or wherever he may be, will carry in his pocket an audion or receiver, listed under his own number and tuned to an affinity different from that of any other audion. Should some one call that number, immediately the audion will buzz a warning. True, the man will not be able to telephone without connection with a transmitting apparatus. But there will be found in all vehicles, and even on street corners, as letter drops now are. All he will then have to do will be to connect his receiver with the transmitter, drop a coin in the slot, and communication will be set up immediately.

Indeed this electrical age into which we are rapidly sliding will also be an automatic age. Even an automatic electric receiving teller, already invented, will accept your bank deposit and make the proper entry in your bankbook.

This great subterranean metropolis will not be a stuffy, unhealthy place of gloom. The solar generator will pass underground the vast electric energy of the sun, which will keep millions of lights at a steady glow and transform the place into the "City of the Future." Gigantic electric fans will keep a steady stream of pure air flowing through the streets, and enormous suction pumps will remove the foul. In this future electrical city darkness will be of the past.—Harold Chapman in the New York Tribune.

**OBITUARY.**

Mr. "White Nose" is no more. In other words, he is dead—dead as one of Dickens' door nails. He departed this life at 9 p. m. the 22 of December, 1909. Mr. "White Nose" was a dog, and no common one. He was of small, medium size, compactly built and of fine

home a full week, it was found that he had followed Bob Cross to Sulphur Spring camp meeting, and had worshipped with Bob for the full week. Mr. White Nose had another name, "Lincoln," and was called "Link" for short, but he was best known by the name that harmonized with his clear white color. He could run as fast as any other dog of his size and build, but not fast enough to overtake a rabbit, however, what he lacked in speed he made up in rapid barking, giving forth a bark for every jump he made, and his barks so terrified rabbits as to cause their tails to turn white. For a year preceding Mr. White Nose's death he had a social companion known as "Mr. Black Nose," a slender built black dog of the high grade Kentucky speed class, and although not much larger than a big rabbit, could, and yet can, pick up a rabbit over either smooth or rough ground. Being thus out-classed for speed, I think, caused Mr. White Nose to yield to the infirmities of age and die prematurely.

Well, why so much about a dog or dogs? Simply this: The dog is proverbially spoken of as mean, whilst an average dog, and especially a good one, in some respects averages above the status of a good man. Such a man rebels often against the just requirements of his Great Master and complains because of merited chastisement, whilst the dog, unjustly whipped, affectionately licks the hand from which the cruel rod has just fallen; and the out-

## POLITICAL LEADERS IN CONFLICT?

CAN SHARP AND  
SANFORD BOTH BE

APPOINTED P. M.—GENERAL

Federal Berths Many and Important  
in Prospect for Tennessee  
Republicans in State Affairs.

The news sent out from Washington by the Associated Press that Internal Revenue collector Robt. S. Sharp would be named after the holidays as first assistant postmaster-general of the United States, succeeding Mr. Granfield, who has been made postmaster at

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nature we are ignorant of?—Thomas A. Edison.

The time will come, and soon, when electricity will be the controlling factor in most things.

The city of the future is a wonderful thing to contemplate—nearly everything electrical; nearly everything automatic. Press a button or turn a switch, and, lo! the thing desired appears. The fairy stories of the magic wand come true. No effort required and little expense, for nature will provide the electrical energy of the future if the device of one modern magician for generating electricity from the sun's rays proves practical. Place it on the roof of your house, and in one sunny day a sufficient amount of electricity will be accumulated in the storage batteries to light and heat your home and cook your meals for a week.

This would mean that every family will have, for the small initial outlay necessary to procure the solar generator and the equipment of the house, its own electric light plant, which will be continually in operation without attention or additional cost.

Imagine the wonderful brilliancy of the future electrical city, with the vast sleeping energy of the sun unloosed to its utmost extent. By night it will be one enormous "great white way."

Set up on the inventor's housetop, the sun electrical generator looks for

than the first month's coal bill under the present system.

Now that nature seems willing to provide electricity without cost, what are the various purposes for which it may be used?

Every one knows that its uses today are common for power, lighting, heating and cooking. What else? Many things.

One may even be shaved by electricity in the twinkling of an eye—if one happens to be a man—and frequently one happens to have that misfortune. And if one happens to be a member of the fair sex, one may do the family sewing and the family pressing by electricity—no longer trouble in keeping the iron at the proper temperature, and burning tender hands in the effort, for the electric iron may be heated right in the sewing room wherever there is a socket.

Even the food products consumed in the electric city of the future will be the results of electricity applied to agriculture. There is now in daily use milk reduced to a powdered form and yet remaining in a raw state, which will keep indefinitely. This is the result of an electric process. Even today nearly all the kitchen work can be done by electricity with a small motor, provided with a double attachment shaft for the necessary devices for coffee grinding, cream whipping, cake mixing, butter churning, grating, ice chop-

ing have received the most careful—often the devoted attention of master builders.

Until the advent of the electric light a little more than a quarter of a century ago there had been no essential change in the means of producing illumination: flames were the only source of artificial light. The electric light marked a new epoch, and was the beginning of a revolution in lighting which is still only in the first stages of its progress.

The electric city of the future will know no darkness. All the world will then be a "Land of the Midnight Sun,"

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The electric city of the future will know no darkness. All the world will then be a "Land of the Midnight Sun,"

the mezzanine.

**Signals for Engineers.**

As vessels are provided with the automatic wireless marine signal, known as the aeroplane, so trains may have a device constructed on the same principle for transmitting to the engineer's cab a wireless signal. This device will apprise the engineer of the approach of another locomotive or of any obstruction on the track two miles distant.

The United States navy department is now going more deeply into wireless than ever before. The 600-foot wireless tower being erected at Washing-

proportions. Socially he was highly connected, being in sense related to big hearts; Jim Burns, for Jim raised him; but he was the special favorite of Alex. So highly did Alex. esteem him that when advised of the plan to kill him so as to avoid the dog tax, Alex wrote: "Kill my dog, kill me."

Mr. White Nose was a full 16-years' resident of Vineland, Indian Ridge, and played a conspicuous part in dog life. His predecessor was a half-brother, hence he bore the name of "Mr. One-Eye," and was considered almost religious, for, after being absent from

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